

Work Order ID 158168

Monday, March 13, 2017 10:45:22 AM

158168

Page 1

Item ID: D4037-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Fwd Crossbeam
Start Date: 3/15/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 3/27/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference: SCHEDULE/S

Approvals: Process Plan: DAS 21 Date: MAR 13 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: S-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4037	E								
100		0.01							
100									
Waterjet	Memo	0.11							
FLOW CNC Waterjet	Cut blank as per file D4037-3_BLANK								
110		0.28							
110									
HAAS 1	Memo	0.28							
HAAS CNC vertical machine #1	MACHINE AS PER FOLI FA878 AND DWG								
	FOLIO REV: <u>AA</u>								
	DWG REV: <u>E</u>								
	DEBURR								

DAS
46
9-89

17/03/19

17-3-21

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00				1			17-321
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				1			DAS 49 9-89 17/03/22
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.05				(X1)			201703/22 BEB

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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Description Work Order Deviation			Disposition		
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* Powdercoat Powder Coating	<i>M136657.</i> White Gloss(Ref:4.3.5.1) per QS1005 4.3-Alum Memo	0.00 0.06	<i>START: 2:05</i> <i>OV. T: 320°</i> <i>FINISH: 2:35</i>			<i>1</i>	<i>17-03-28</i>	<i>33</i> 9-89	
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				<i>1</i>		<i>38</i> 9-89 MAR 29 2017	
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: <i>51471</i> Memo	0.00 0.00				<i>1</i>		<i>41</i> 9-89 MAR 30 2017	

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N900040100

Setup Start *NS1*

Stop ***NS2***

Cust Item ID:

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Customer:

Reference: SCHEDULE/S

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Operation Description

Set Up/ Run Hours

Tool ID**Tool #****Plan
Code**

**Accept
Qty**

Reject
QtyReject
Number**Insp.
Stamp**

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.00

Quality Control

DAS
21
9-89

MAR 31 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Picklist Print

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158168

Parent Item: D4037-3

D4037-3

Parent Item Name: Fwd Crossbeam

Start Date: 3/15/2017

Required Date: 3/27/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A NEW ISSUE 09-12-14 JLM VERIFIED BY:EC IPP
REV:B AS PER REV B 10-04-19 JLM VERIFIED BY:EC IPP REV:D AS
PER ECN 11-554 11-05-24 JLM VERIFIED BY:DD IPP REV C:AS PER
ECN 10-563 10-09-28 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6B1.000X16.00
0

Purchased

No

100

f

19.1000

3.9

4.105263

M6061T6B1 000X16 000

6061-T6 Bar 1.00 x 16.00

**

DAS
46
9-89

17/03/20

Location

Loc Qty

Loc Code

MAT007

19.1

m136396

15.1

m136899

4

M137080

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

DART AEROSPACE LTD	Work Order:	158168
Description: Fwd Crossbeam	Part Number:	D4037-3
Inspection Dwg: D4037 Rev: E		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
41.66	+/-0.030	41.66	✓			
0.92	+/-0.030	.920	✓			
1.75	+/-0.030	1.750	✓			
0.92	+/-0.030	.921	✓			
2.125	+/-0.010	2.125	✓			
Ø0.316	+0.006/-0.001	.317	✓			
Ø0.391	+0.006/-0.001	.391	✓			
0.28	+/-0.030	.280	✓			
R0.19	+/-0.030	R.188	✓			
0.63	+/-0.030	.625	✓			
1.50	+/-0.030	1.501	✓			
1.20	+/-0.030	1.200	✓			
1.95	+/-0.030	1.950	✓			
6.00	+/-0.030	6.00	✓			
10.54	+/-0.030	10.540	✓			
1.38	+/-0.030	1.373	✓			
1.75	+/-0.030	1.750	✓			
7.79	+/-0.030	7.786	✓		HG	
5.80	+/-0.030	5.8	✓			
2.250	+/-0.010	2.250	✓			
0.875	+/-0.010	.875	✓			
6.000	+/-0.010	6.000	✓			
7.75	+/-0.030	7.750	✓			
1.125	+/-0.010	1.125	✓			
9.29	+/-0.030	9.290	✓		HG	
5.17	+/-0.030	5.17	✓			
10.79	+/-0.030	10.790	✓			
0.91	+/-0.030	.915	✓			
0.09 x 45°	+/-0.030 x +/-0.5°	.09x45°	✓			
0.31	+/-0.030	.310	✓			
0.25	+/-0.030	.252	✓			
0.530	+/-0.010	.524	✓			
0.25	+/-0.030	.253	✓			
0.550	+/-0.010	.550	✓		HG	
3.00	+/-0.030	3.001	✓			
2.00	+/-0.030	2.008	✓			
1.00	+/-0.030	1.020	✓			

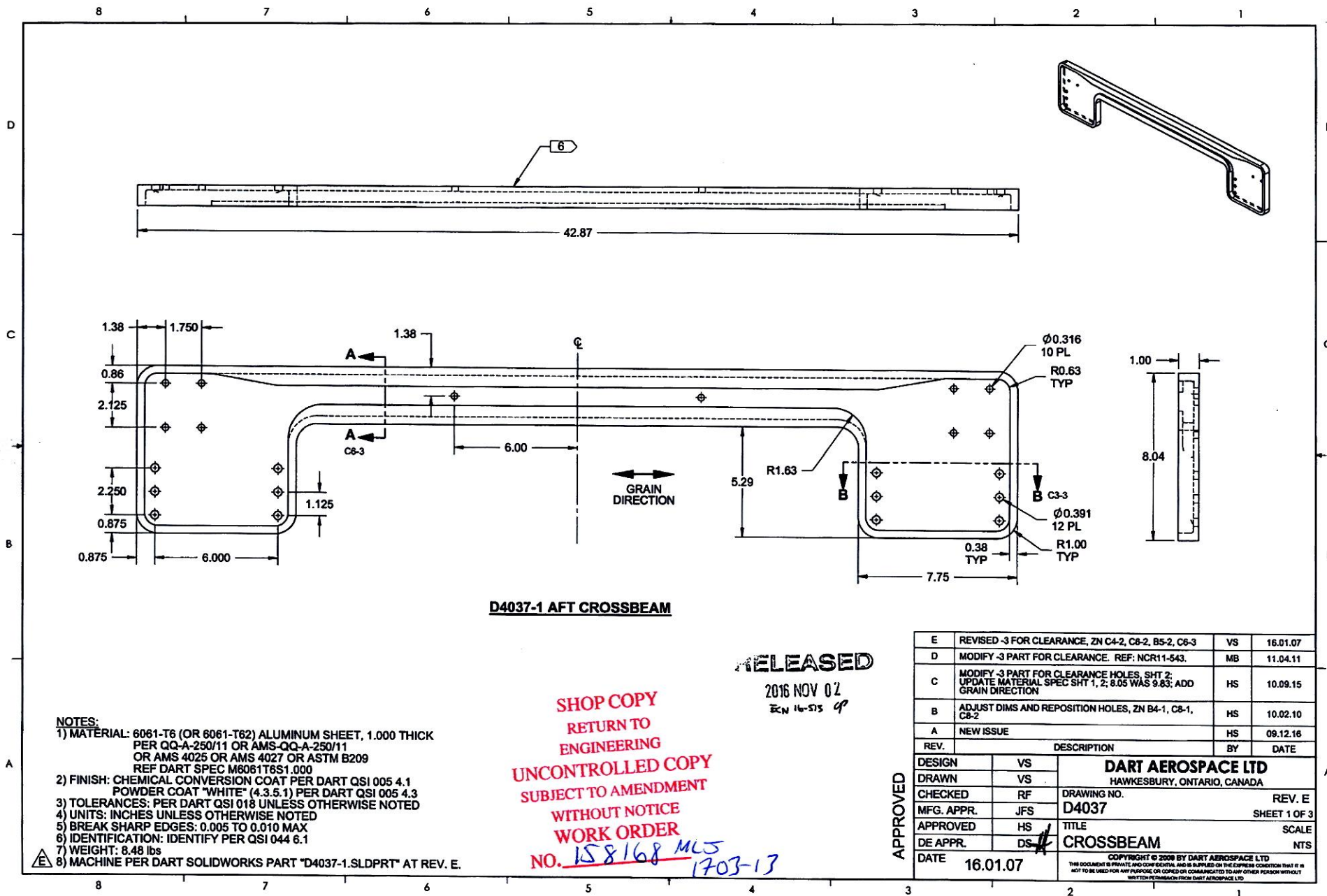
DART AEROSPACE LTD		Work Order:	158168
Description: Fwd Crossbeam		Part Number:	D4037-3
Inspection Dwg: D4037 Rev: E		Page 2 of 2	

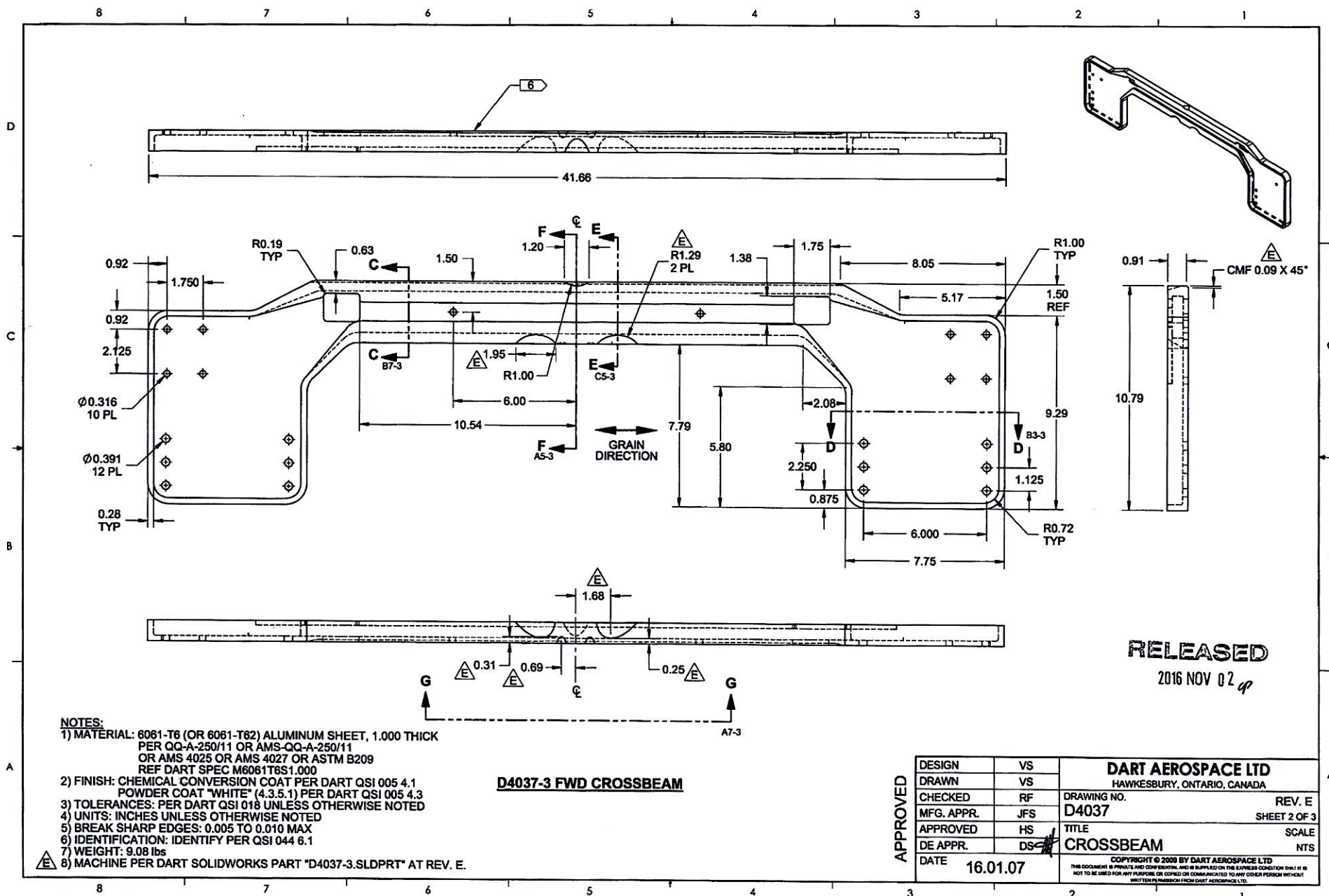
FIRST ARTICLE INSPECTION CHECKLIST

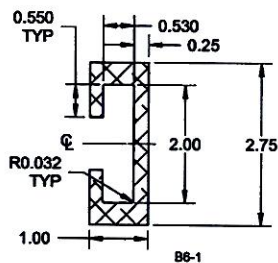
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.32 2.032	+/-0.030	-030	/			
0.200 2.008	+/-0.010 ⁺⁰³	2.008	/			
0.64	+/-0.030	-660	/			
0.45	+/-0.030	-455	/			
0.70	+/-0.030	-670	/			
0.25	+/-0.030	-253	/			
R0.13	+/-0.030	-125	/			
0.49	+/-0.030	-500	/			
0.06	+/-0.030	-067	/			

Measured by:	JK	Audited by:	49 9.80	Preliminary Approval:	
Date:	17-3-21	Date:	17/03/22	Date:	

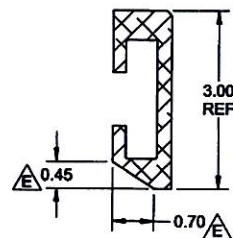
Rev	Date	Change	Revised by	Approved
A	10.06.08	New Issue	KJ	
B	10.10.07	Dimensions updated per Dwg Rev C	KJ	
C	11.06.21	Dwg Rev updated	KJ	
D	17.02.16	Dimensions updated per Dwg Rev E	KJ	JA



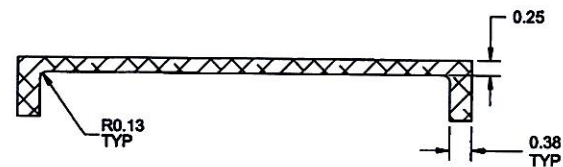




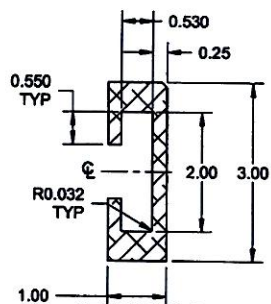
SECTION A-A



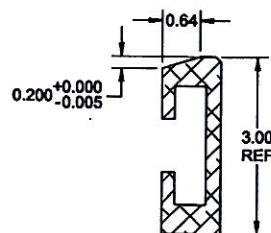
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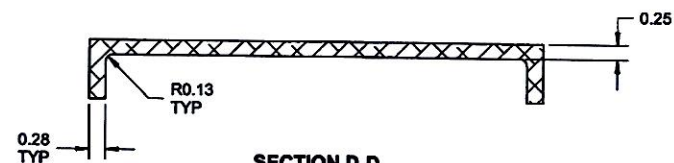
SECTION B-B



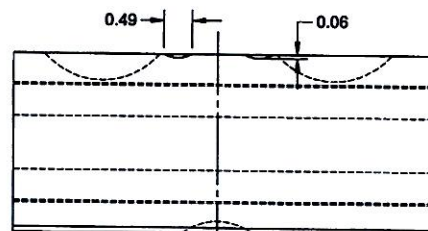
SECTION C-C



SECTION F-F



SECTION D-D



VIEW G-G

RELEASED

2016 NOV 02

APPROVED	DESIGN	VS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	VS		
	CHECKED	RF	DRAWING NO.	REV. E
	MFG. APPR.	JFS	D4037	SHEET 3 OF 3
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	CROSSBEAM	NTS
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